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**SCS ENGINEERS**

## **Results of the 4<sup>th</sup> Quarter 2005 Groundwater Monitoring and Sampling Event**

**Ghilotti Construction Company  
246 Ghilotti Avenue  
Santa Rosa, California  
(SCDHS-EHD Site #02017; NCRWQCB Site #1TSO501)  
(Assessor's Parcel No. 134-171-053)**

**File Number 01203312.00**

**Prepared by:**

**SCS Engineers  
3645 Westwind Boulevard  
Santa Rosa, California 95403**

**To:**

**Mr. Cliff Ives  
Sonoma County Department of Health Services  
475 Aviation Blvd., Suite 220  
Santa Rosa, California 95403**

**January 3, 2006**

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*Mr. Cliff Ives*  
*January 3, 2006*  
*Page ii*

#### LIMITATIONS/DISCLAIMER

This report has been prepared for the Ghilotti Construction Company with specific application to a Quarterly Monitoring event for the property located at 246 Ghilotti Avenue, Santa Rosa, California. Field activities and sampling were conducted in accordance with the care and skill generally exercised by reputable professionals, under similar circumstances, in this or similar localities. No other warranty, either expressed or implied, is made as to the professional advice presented herein.

Access to the property and the surrounding area was and is limited by buildings, roadways, underground and above-ground utilities and other miscellaneous site and site vicinity features. Therefore, the field exploration and points of subsurface observation were and are somewhat restricted.

Changes in site use and conditions may occur due to variations in rainfall, temperature, water usage, or other factors. Additional information which was not available to the consultant at the time of this quarterly monitoring event or changes which may occur on the site or in the surrounding area may result in modification to the site that would impact the summary presented herein. This report is not a legal opinion.

We trust this report provides the information you require at this time. If you have any questions, or require any additional information, please contact SCS at (707) 546-9461.

*[Signature]*

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Kevin L. Coker REA 7887  
CA registration fees paid through 06/30/06

*1-506*

Date



*6. JAN., 2006*

Date

*[Signature]*

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Stephen Knuttel PG #7674  
CA registration fees paid through 07/31/07

## **Introduction**

SCS Engineers (SCS) is pleased to present the results of the 4<sup>th</sup> quarter 2005 groundwater monitoring and sampling event at 246 Ghilotti Avenue, Santa Rosa, California. A summary of historical site investigative activities is presented in previous reports (PNEG, 1996, 2002b; SCS, 2005a). The site is located as shown on the Site Location Map, Figure 1. General site features are as shown on the Site Plan, Figure 2.

## **Groundwater Monitoring**

Depth to groundwater measurements were collected from MW-1 through MW-10 on November 18, 2005. Depths to groundwater ranged from approximately 8.5 to 10.5 feet below existing ground surface (bgs). Groundwater elevations, flow direction, and gradient were calculated from this data. The depth to groundwater measurements were combined with the well casing elevations to calculate the groundwater flow direction and gradient. Casing and groundwater elevations are reported in feet relative to mean sea level. Depths to groundwater are expressed in feet. For the 4<sup>th</sup> quarter 2005 monitoring event, the groundwater flow direction was calculated to be southwesterly at a gradient of 0.005. Historical and current groundwater elevation data are presented in Table 1, and on Figure 2.

## **Groundwater Sampling**

After depth to groundwater measurements were collected, each of the project wells was checked for the presence of free product using an oil/water interface probe and by subjective evidence. No free product was reported during this sampling event. The wells were then purged using either a submersible pump or a clean disposable bailer. Temperature, pH, conductivity, turbidity, and dissolved oxygen were measured during purging to help demonstrate that fresh groundwater was entering the well casing for sampling. Information obtained during sampling was recorded on groundwater field sampling forms and Well Purge Records were generated, copies of which are presented in appendix A. Each well was allowed to recover prior to sampling. Groundwater samples were collected using a separate disposable bailer for each well, and were transferred into the appropriate containers supplied by the laboratory for analysis. The groundwater samples were labeled, stored under refrigerated conditions, and transported under Chain-of-Custody documentation to Analytical Sciences (AS) in Petaluma, California. AS is a California Department of Health Services certified laboratory for the analyses requested. AS' current certifications have been reviewed and are on file at SCS. All samples were collected in accordance with SCS' Standard Soil and Water Sampling Procedures and QA/QC Protocol. Purge water from recent groundwater sampling activities is stored at the site in 55-gallon UN/DOT-approved drums, pending disposal.

## **Groundwater Sampling – Domestic Well**

A groundwater sample was collected from the on-site water supply well, DW-1 (also denoted as DW-246 in previous reports), on November 18, 2005. This sample was handled and transported following the same procedures as those used for the monitoring well samples. This well is not currently used as a drinking water supply well.

### **Laboratory Analysis**

The monitoring well and water supply well samples were analyzed for the five ether-based oxygenates [methyl tert-butyl ether (MTBE), diisopropyl ether (DIPE), ethyl tert butyl ether (ETBE), tert-amyl methyl ether (TAME), and tert-butyl alcohol (TBA)] using EPA Method 8260B.

### **Groundwater Analytical Results**

For the most recent sampling event on November 18, 2005, MTBE was detected in the samples collected from MW-1, MW-2, MW-3, MW-08, and MW-09 at concentrations ranging from 7.2 µg/L in MW-1 to 35 µg/L in MW-3. MTBE was not detected above the laboratory report detection limit (RDL) in the samples collected from MW-04, MW-05, MW-06, MW-07, MW-10, and MW-11. Samples collected from MW-05, MW-06, and MW-08 were below the laboratory RDL for MTBE for the fourth consecutive sampling event. All samples were below the laboratory RDL for the other fuel oxygenate analytes. Historical and recent monitoring well analytical results are summarized in Table 3. Analytical results to date for MTBE are plotted on the time versus concentration diagram (Diagram A), and contoured on the isoconcentration map for MTBE, Figure 3. Based on our interpretation of current and past data, it appears that the samples collected from MW-08 and MW-10 were inadvertently switched during this sampling event. As such, the values reported for MW-08 and MW-10 have been switched in Table 2, Figure 3, and Diagram A. This will be confirmed during the next sampling event scheduled for February 2006.

The sample collected from DW-1 on November 18, 2005 was below the laboratory RDL for all target analytes. Water supply well analytical results are summarized on Table 2.

### **Discussion**

SCS submitted a Work Plan and subsequent revision for additional site characterization to the SCDHS (SCS, 2005c, 2005e). A drilling permit application and access agreement were submitted to the SCDHS on December 23, 2005. Upon receipt of SCDHS approval, a drilling date will be secured with a drilling contractor and advance notification of drilling activities will be provided.

In accordance with the SCDHS' directive (SCDHS, 2005b), an analytical test method which uses a TBA detection limit of 12 µg/L was used for this sampling event to demonstrate that TBA is not present above this level in groundwater beneath the Site. If, at the completion of the next sampling event with this change, TBA continues to not be detected above 12 µg/L, SCS will request removal of the additional oxygenates (TAME, DIPE, ETBA, and TBA) from the analytical suite.

**Attachments**  
**File No. 01203312.00**

**Figures**

- Figure 1: Site Location Map  
Figure 2: Site Plan - Groundwater Flow Direction and Gradient for 11/18/05  
Figure 3: Isoconcentration Map – MTBE in Groundwater for 11/18/05

**Diagram and Tables**

Key to Diagrams and Tables

- Diagram A: MTBE & Groundwater Elevation vs Time  
Table 1: Groundwater Flow Direction and Gradient - 1996 to Present  
Table 2: Domestic Well Analytical Results  
Table 3: Groundwater Analytical Results – Monitoring Wells

**Appendices**

- Appendix A: Well Purge Records, 4<sup>th</sup> Quarter 2005  
Appendix B: Analytical Sciences Report #5112203, dated December 5, 2005  
Certificate of Disposal, dated October 11, 2005

**Reference List**  
**File No. 01203312.00**

- PNEG, 1996. Monitoring Report, Sensitive Site Receptor Survey, and Request for Site Closure, 246 Ghilotti Avenue, Santa Rosa, California, October 15.
- PNEG, 1997a. Monitoring Report and Request for Site Closure, 246 Ghilotti Avenue, Santa Rosa, February 5.
- PNEG, 1997b. September 1997 Semiannual Groundwater Monitoring Report and Request for Site Closure, 246 Ghilotti Avenue, Santa Rosa, October 17.
- PNEG, 1998a. Semiannual Groundwater Monitoring Report for June 1998 Sampling, 246 Ghilotti Avenue, Santa Rosa, August 1998.
- PNEG, 1999a. Status Report for 246 Ghilotti Avenue, Santa Rosa, December 14.
- PNEG, 1999b. Results of the December 1999 Quarterly Monitoring Event and Domestic Well Sampling at 246 Ghilotti Avenue, Santa Rosa, February 28.
- PNEG, 2000a. Results of the March 2000 Quarterly Monitoring Event and Domestic Well Sampling at 246 Ghilotti Avenue, Santa Rosa, May 31.
- PNEG, 2000b. Results of the 2<sup>nd</sup> Quarter 2000 Monitoring Event and Domestic Well Sampling at 246 Ghilotti Avenue, Santa Rosa, August 7.
- PNEG, 2000c. Results of the 3<sup>rd</sup> Quarter 2000 Monitoring Event and Domestic Well Sampling at 246 Ghilotti Avenue, Santa Rosa, December 11.
- PNEG, 2001a. Results of the 4<sup>th</sup> Quarter 2000 Monitoring Event and Domestic Well Sampling at 246 Ghilotti Avenue, Santa Rosa, February 23.

- PNEG, 2001b. Results of the 2<sup>nd</sup> Quarter 2001 Groundwater Monitoring and Sampling and Domestic Well Sampling Event at 246 Ghilotti Avenue, Santa Rosa, June 6.
- PNEG, 2001c. Results of the 3<sup>rd</sup> Quarter 2001 Groundwater Monitoring and Sampling and Domestic Well Sampling Event at 246 Ghilotti Avenue, Santa Rosa, September 7.
- PNEG, 2001d. Results of the 4<sup>th</sup> Quarter 2001 Groundwater Monitoring and Sampling Event at 246 Ghilotti Avenue, Santa Rosa, November 30.
- PNEG, 2002a. Results of the 1<sup>st</sup> Quarter 2002 Groundwater Monitoring and Sampling Event at 246 Ghilotti Avenue, Santa Rosa, March 20.
- PNEG, 2002b. Work Plan to Define the Lateral and Vertical Extent of MTBE Contamination- 246 Ghilotti Avenue, Santa Rosa, California, May 28.
- PNEG, 2002c. Results of the 2<sup>nd</sup> Quarter 2002 Groundwater Monitoring and Sampling Event at 246 Ghilotti Avenue, Santa Rosa, June 6.
- PNEG, 2002d. Results of the 3<sup>rd</sup> Quarter 2002 Groundwater Monitoring and Sampling Event at 246 Ghilotti Avenue, Santa Rosa, August 14.
- PNEG, 2002e. Results of the 4<sup>th</sup> Quarter 2002 Groundwater Monitoring and Sampling Event at 246 Ghilotti Avenue, Santa Rosa, November 13.
- PNEG, 2003a. Results of the 1<sup>st</sup> Quarter 2003 Groundwater Monitoring and Sampling Event at 246 Ghilotti Avenue, Santa Rosa, California, March 17.
- PNEG, 2003b. Results of the 2<sup>nd</sup> Quarter 2003 Groundwater Monitoring and Sampling Event at 246 Ghilotti Avenue, Santa Rosa, California, May 8.
- SCDHS, 2005a. Work Plan Directive from Mr. Cliff Ives to Mr. Richard Ghilotti, July 11.
- SCDHS, 2005b. Regulatory letter from Mr. Cliff Ives to Mr. Richard Ghilotti re: recommendation to remove additional oxygenates, September 12.
- SCS, 2003a. Results of the 3<sup>rd</sup> Quarter 2003 Groundwater Monitoring and Sampling Event at 246 Ghilotti Avenue, Santa Rosa, California, August 13.
- SCS, 2003b. Results of the 4<sup>th</sup> Quarter 2003 Groundwater Monitoring and Sampling Event at 246 Ghilotti Avenue, Santa Rosa, California, November 20.
- SCS, 2004a. Results of the 1st Quarter 2004 Groundwater Monitoring and Sampling Event at 246 Ghilotti Avenue, Santa Rosa, California, January 29.
- SCS, 2004b. Results of the 2<sup>nd</sup> Quarter 2004 Groundwater Monitoring and Sampling Event at 246 Ghilotti Avenue, Santa Rosa, California, May 7.
- SCS, 2004c. Results of the 3<sup>rd</sup> Quarter 2004 Groundwater Monitoring and Sampling Event at 246 Ghilotti Avenue, Santa Rosa, California, August 9.
- SCS, 2004d. Results of the 4<sup>th</sup> Quarter 2004 Groundwater Monitoring and Sampling Event at 246 Ghilotti Avenue, Santa Rosa, California, December 29.
- SCS, 2005a. Results of Additional Subsurface Investigation, at 246 Ghilotti Avenue, Santa Rosa, California, May 6.
- SCS, 2005b. Results of the 2<sup>nd</sup> Quarter 2005 Groundwater Monitoring and Sampling Event at 246 Ghilotti Avenue, Santa Rosa, California, August 18.
- SCS, 2005c. Work Plan for Additional Subsurface Investigation, at 246 Ghilotti Avenue, Santa Rosa, California, September 9.
- SCS, 2005d. Results of the 3<sup>rd</sup> Quarter 2005 Groundwater Monitoring and Sampling Event at 246 Ghilotti Avenue, Santa Rosa, California, October 24.
- SCS, 2005e. Work Plan Addendum, dated December 5.

*Mr. Cliff Ives*  
*January 3, 2006*  
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**Distribution List  
File No. 01203312.00**

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## **Figures**

Source: Mappoint.com



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PROJ. NO:	01203312.00	TAKEN BY:	FILE:
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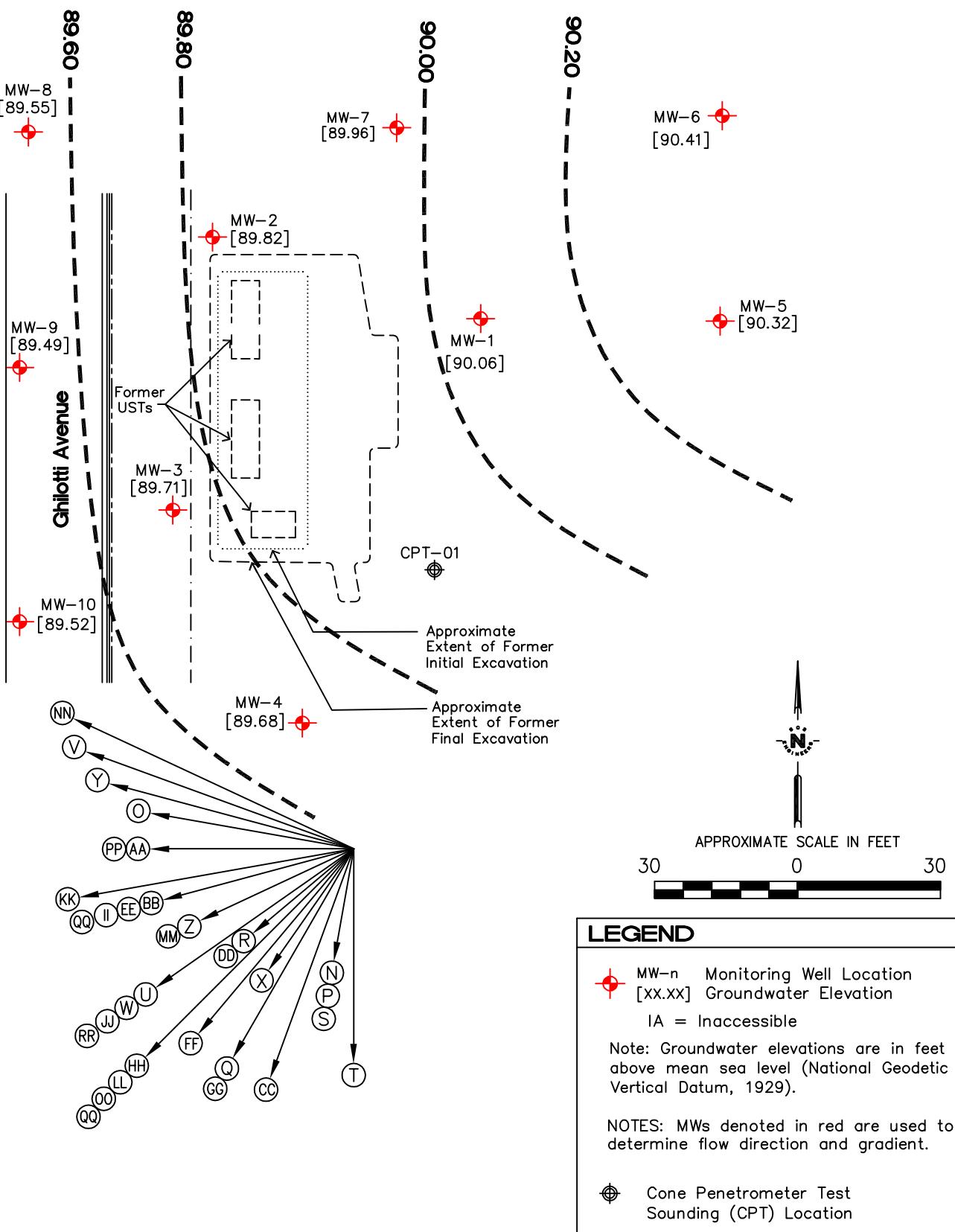
**SITE LOCATION MAP**

Ghilotti Construction Company  
246 Ghilotti Avenue  
Santa Rosa, California

APPROX. SCALE

FIGURE

1



# GROUNDWATER FLOW LEGEND

Estimated Groundwater Flow Direction	Gradient Contour (Interval = 0.20 ft)		Identifier Tag	Date	Est. Flow Direction	Gradient Slope
	→ A	— - - - -				
			(LL)	4/6/04	S45°W	i = 0.002
Identifier Tag	Date	Est. Flow Direction	Gradient Slope	(MM)	7/7/04	S65°W
(N)	6/24/96	S10°W	i = 0.005	(NN)	11/11/04	N60°W
(O)	12/20/96	N80°W	i = 0.003	(OO)	2/11/05	SW
(P)	4/18/97	S10°W	i = 0.005	(PP)	7/6/05	West
(Q)	9/11/97	S30°W	i = 0.006	(QQ)	8/19/05	W to SW
(R)	6/19/98	S48°W	i = 0.002	(RR)	11/18/05	South-westerly
(S)	3/3/99	S10°W	i = 0.002			
(T)	6/2/99	Due South	i = 0.008			
(U)	12/28/99	S55°W	i = 0.003			
(V)	3/23/00	N68°W	i = 0.03			
(W)	6/20/00	S55°W	i = 0.003			
(X)	10/3/00	S35°W	i = 0.005			
(Y)	1/9/01	N75°W	i = 0.002			
(Z)	4/10/01	S65°W	i = 0.003			
(AA)	7/11/01	West	i = 0.003			
(BB)	10/10/01	S75°W	i = 0.004			
(CC)	1/9/02	S20°W	i = 0.003			
(DD)	4/5/02	S50°W	i = 0.002			
(EE)	7/3/02	S75°W	i = 0.004			
(FF)	10/24/02	S40°W	i = 0.005			
(GG)	1/22/03	S30°W	i = 0.002			
(HH)	4/17/03	S45°W	i = 0.002			
(II)	7/14/03	S75°W	i = 0.003			
(JJ)	10/7/03	S55°W	i = 0.004			
(KK)	1/2/04	S80°W	i = 0.002			

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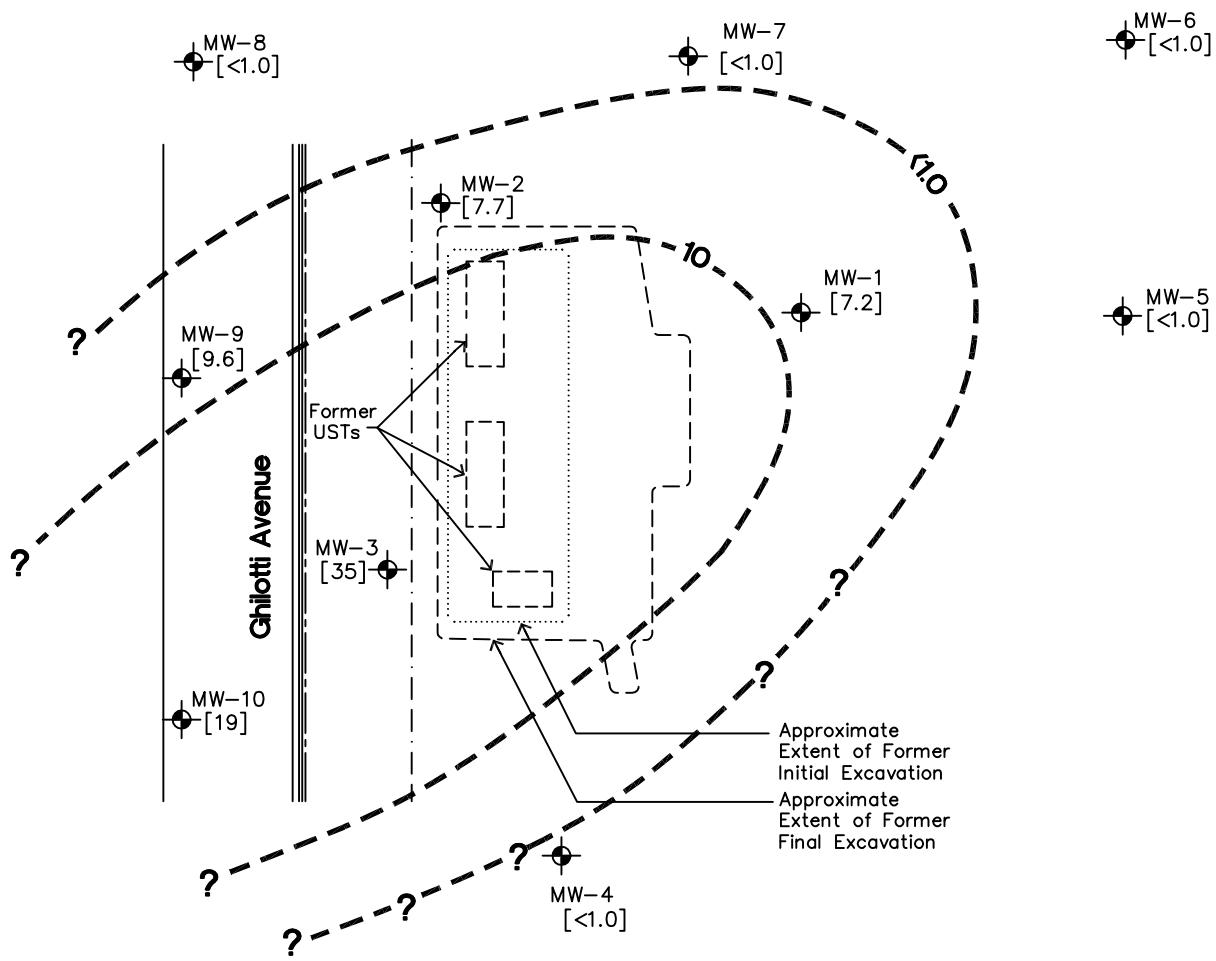
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DATE:	01/04/05	CHK. BY:		APP. BY:	SK

SHEET TITLE: SITE PLAN  
GROUNDWATER FLOW DIRECTION AND GRADIENT FOR 11/18/05

PROJECT TITLE: GHILOTTI CONSTRUCTION COMPANY  
246 GHILOTTI AVENUE  
SANTA ROSA, CALIFORNIA

SCALE:  
1" = 30'

FIGURE NO.:  
2  
SHEET 2 OF 2



APPROXIMATE SCALE IN FEET

30 0 30

#### LEGEND

- Monitoring Well Location  
IA = Well Inaccessible
- Isoconcentration Line  
MTBE, ug/L

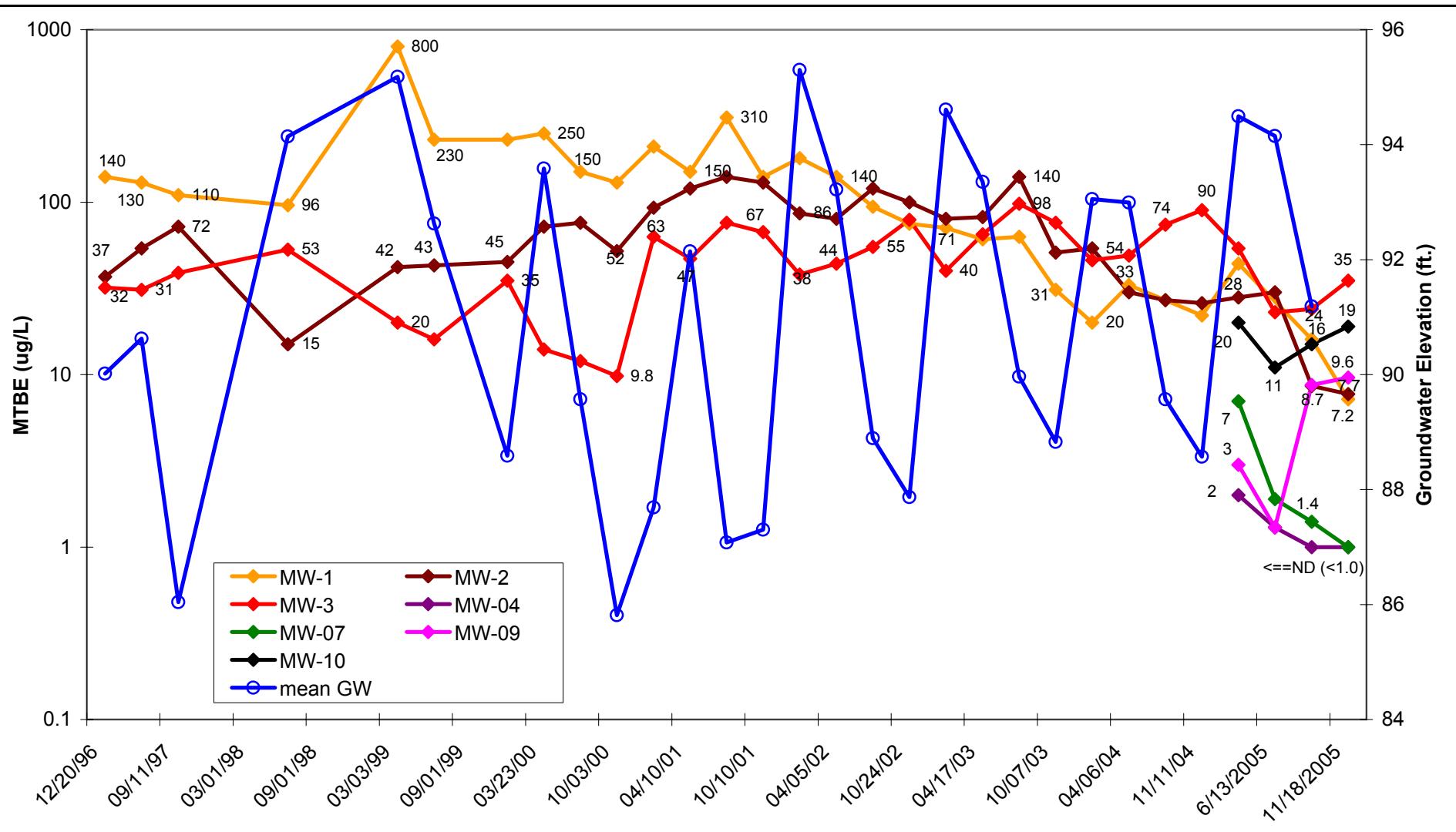
<b>SCS ENGINEERS</b>		
ENVIRONMENTAL CONSULTANTS		
3645 WESTWIND BOULEVARD SANTA ROSA, CALIFORNIA 95403 PH. (707) 546-9461 FAX. (707) 544-5769	PROJ. NO.: 3312.00	DWN. BY: AJH ACAD FILE: 3312.00-IS03-3552
DATE: 01/04/05	CHK. BY: SK	APP. BY: SK

SHEET TITLE: ISOCONCENTRATION MAP MTBE IN GROUNDWATER FOR 11/18/05	SCALE: 1" = 30'
PROJECT TITLE: GHILOTTI CONSTRUCTION COMPANY 246 GHILOTTI AVENUE SANTA ROSA, CALIFORNIA	FIGURE NO.: 3

## **Diagrams and Tables**

**Key to Diagram and Tables**  
**246 Ghilotti Avenue, Santa Rosa**

TPH-g	=	Total petroleum hydrocarbons in the gasoline range
B	=	Benzene
T	=	Toluene
E	=	Ethylbenzene
X	=	Xylenes
MTBE	=	Methyl tertiary butyl ether
Five Oxys	=	Five ether-based oxygenate compounds [diisopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tert-amyl methyl ether (TAME), MTBE, and tert-butyl alcohol (TBA)]
mg/kg	=	Milligrams per kilogram
$\mu\text{g/L}$	=	Micrograms per liter
NAPL	=	Non aqueous phase liquid



Note: MW-1, MW-2, and MW-04 were inaccessible for the June 13, 2005 sampling event. All other wells not plotted have been below the laboratory RDL for MTBE.

SCS ENGINEERS	MTBE & Groundwater Elevation vs Time	DIAGRAM
3645 WESTWIND BOULEVARD SANTA ROSA, CALIFORNIA PH: (707) 546-9461 FX: (707)544-5769	Ghilotti Construction Company 246 Ghilotti Avenue Santa Rosa, California	A
Drawn By: KLC	File Name: MTBE-GW	DATE: 12/08/05

**Table 1: Groundwater Flow Direction and Gradient - 1996 to Present**  
**246 Ghilotti Avenue, Santa Rosa**

Well #	Date Measured	Top of Casing Elevation (ft. > msl)	Depth to Groundwater (feet)	Water Level Elevation (ft. > msl)	Groundwater Flow Direction & Gradient (i)
MW-1	06/24/96	99.48	7.42	92.06	S10°W i = 0.005
MW-2		99.77	7.67	92.1	
MW-3		99.38	7.58	91.8	
MW-1	12/20/96	99.48	10.00	89.48	N80°W i = 0.003
MW-2		99.77	10.5	89.27	
MW-3		99.38	10.1	89.28	
MW-1	04/18/97	99.48	7.19	92.29	S10°W i = 0.005
MW-2		99.77	7.41	92.36	
MW-3		99.38	7.34	92.04	
MW-1	09/11/97	99.48	13.29	86.19	S30°W i = 0.006
MW-2		99.77	13.65	86.12	
MW-3		99.38	13.57	85.81	
MW-1	06/19/98	99.48	5.28	94.2	S48°W i = 0.002
MW-2		99.77	5.62	94.15	
MW-3		99.38	5.3	94.08	
MW-1	03/03/99	99.48	3.35	96.13	S10°W i = 0.002
MW-2		99.77	3.57	96.2	
MW-3		99.38	3.33	96.05	
MW-1	06/02/99	99.48	6.79	92.69	Due South i = 0.008
MW-2		99.77	6.91	92.86	
MW-3		99.38	7.04	92.34	
MW-1	12/28/99	99.48	12.73	86.75	S55°W i = 0.003
MW-2		99.77	13.16	86.61	
MW-3		99.38	12.86	86.52	
MW-1	03/23/00	99.48	4.85	94.63	N68°W i = 0.03
MW-2		99.77	5.33	94.44	
MW-3		99.38	4.91	94.47	
MW-1	06/20/00	99.48	8.44	91.04	S55°W i = 0.003
MW-2		99.77	8.84	90.93	
MW-3		99.38	8.57	90.81	
MW-1	10/03/00	99.48	13.6	85.88	S35°W i = 0.005
MW-2		99.77	13.98	85.79	
MW-3		99.38	13.87	85.51	
MW-1	01/09/01	99.48	13.31	86.17	N75°W i = 0.002
MW-2		99.77	13.71	86.06	
MW-3		99.38	13.31	86.07	
MW-1	04/10/01	99.48	6.79	92.69	S65°W i = 0.003
MW-2		99.77	7.22	92.55	
MW-3		99.38	6.92	92.46	
MW-1	07/11/01	99.48	11.39	88.09	West i = 0.003
MW-2		99.77	11.87	87.90	
MW-3		99.38	11.50	87.88	
MW-1	10/10/01	99.48	14.78	84.70	S75°W i = 0.004
MW-2		99.77	15.24	84.53	
MW-3		99.38	14.93	84.45	

**Table 1: Groundwater Flow Direction and Gradient - 1996 to Present**  
**246 Ghilotti Avenue, Santa Rosa**

Well #	Date Measured	Top of Casing Elevation (ft. > msl)	Depth to Groundwater (feet)	Water Level Elevation (ft. > msl)	Groundwater Flow Direction & Gradient (i)
MW-1	01/09/02	99.48	3.75	95.73	S20°W i = 0.003
MW-2		99.77	4.06	95.71	
MW-3		99.38	3.85	95.53	
MW-1	04/05/02	99.48	5.09	94.39	S50°W i = 0.002
MW-2		99.77	5.44	94.33	
MW-3		99.38	5.15	94.23	
MW-1	07/03/02	99.48	9.25	90.23	S75°W i = 0.004
MW-2		99.77	9.74	90.03	
MW-3		99.38	9.44	89.94	
MW-1	10/24/02	99.48	13.70	85.78	S40°W i = 0.005
MW-2		99.77	14.13	85.64	
MW-3		99.38	14.01	85.37	
MW-1	01/22/03	99.48	4.65	94.83	S30°W i = 0.002
MW-2		99.77	4.97	94.80	
MW-3		99.38	4.69	94.69	
MW-1	04/17/03	99.48	5.20	94.28	S45°W i = 0.002
MW-2		99.77	5.55	94.22	
MW-3		99.38	5.25	94.13	
MW-1	07/14/03	99.48	8.44	91.04	S75°W i = 0.003
MW-2		99.77	8.90	90.87	
MW-3		99.38	8.59	90.79	
MW-1	10/07/03	99.48	11.75	87.73	S55°W i = 0.004
MW-2		99.77	12.01	87.76	
MW-3		99.38	12.21	87.17	
MW-1	01/02/04	99.48	6.68	92.80	S80°W i = 0.002
MW-2		99.77	7.08	92.69	
MW-3		99.38	6.72	92.66	
MW-1	04/06/04	99.48	5.21	94.27	S45°W i = 0.002
MW-2		99.77	5.58	94.19	
MW-3		99.38	5.32	94.06	
MW-1	07/07/04	99.48	9.71	89.77	S65°W i = 0.003
MW-2		99.77	10.18	89.59	
MW-3		99.38	9.92	89.46	
MW-1	11/23/04	99.48	11.71	87.77	N60°W i = 0.003
MW-2		99.77	12.17	87.60	
MW-3		99.38	11.73	87.65	
MW-1	02/11/05*	99.48	4.90	94.58	SW i = 0.002
MW-2		99.77	5.21	94.56	
MW-3		99.38	4.86	94.52	
MW-04		98.31	3.87	94.44	
MW-05		100.20	5.52	94.68	
MW-06		100.95	6.23	94.72	
MW-07		100.17	5.57	94.60	
MW-08		98.37	3.89	94.48	
MW-09		98.46	4.02	94.44	
MW-10		98.04	3.73	94.31	

**Table 1: Groundwater Flow Direction and Gradient - 1996 to Present**  
**246 Ghilotti Avenue, Santa Rosa**

Well #	Date Measured	Top of Casing Elevation (ft. > msl)	Depth to Groundwater (feet)	Water Level Elevation (ft. > msl)	Groundwater Flow Direction & Gradient (i)
MW-1	06/13/05	99.48		Inaccessible	West i = 0.005
MW-2		99.77		Inaccessible	
MW-3		99.38	5.23	94.15	
MW-4		98.31		Inaccessible	
MW-5		100.20	5.39	94.81	
MW-6		100.95	6.46	94.49	
MW-7		100.17	5.86	94.31	
MW-8		98.37	4.19	94.18	
MW-9		98.46	4.35	94.11	
MW-10		98.04	4.00	94.04	
MW-1	08/19/05	99.48	8.15	91.33	W to SW i = 0.004 to 0.002
MW-2		99.77	8.52	91.25	
MW-3		99.38	8.26	91.12	
MW-4		98.31	7.15	91.16	
MW-5		100.20	8.74	91.46	
MW-6		100.95	9.36	91.59	
MW-7		100.17	8.59	91.58	
MW-8		98.37	7.40	90.97	
MW-9		98.46	7.53	90.93	
MW-10		98.04	7.09	90.95	
MW-1	11/18/05	99.48	9.42	90.06	Southwesterly i = 0.005
MW-2		99.77	9.95	89.82	
MW-3		99.38	9.67	89.71	
MW-4		98.31	8.63	89.68	
MW-5		100.20	9.88	90.32	
MW-6		100.95	10.54	90.41	
MW-7		100.17	10.21	89.96	
MW-8		98.37	8.82	89.55	
MW-9		98.46	8.97	89.49	
MW-10		98.04	8.52	89.52	

\* MW-04 through MW-10 were surveyed to msl on March 9, 2005.

**Table 2: Domestic Well Analytical Results**  
**246 Ghilotti Avenue, Santa Rosa**

ID	Date Sampled	TPH-g	TPH-d	B	T	E	X	MTBE*	OTHER OXY'S*
		<b>µg/L</b>							
DW-1	07/21/98	<50	NA	<50	<0.3	<0.5	<0.5	<b>3.4</b>	NA
	08/05/99	<50	NA	<50	<0.3	<0.5	<0.5	<b>3</b>	NA
	12/28/99	<50	NA	<50	<0.3	<0.5	<0.5	<b>1</b>	<1.0
	03/23/00	<50	<50	<50	<0.3	<0.5	<0.5	<b>1.5</b>	<1.0
	06/20/00	<50	<50	<50	<0.3	<0.5	<0.5	<1.0	<1.0
	10/03/00	NA	NA	NA	NA	NA	NA	<b>1.5</b>	<1.0
	01/09/01	NA	NA	NA	NA	NA	NA	<b>1.1</b>	<1.0
	04/10/01	NA	NA	NA	NA	NA	NA	<1.0	<1.0
	07/10/01	NA	NA	NA	NA	NA	NA	<1.0	<1.0
	10/10/01	NA	NA	NA	NA	NA	NA	<1.0	NA
	02/14/02	NA	NA	NA	NA	NA	NA	<1.0	NA
	04/05/02	NA	NA	NA	NA	NA	NA	<b>0.59</b>	<1.0
	07/03/02	NA	NA	NA	NA	NA	NA	<0.5	<1.0
	10/24/02	NA	NA	NA	NA	NA	NA	<0.5	<1.0
	02/14/03	NA	NA	NA	NA	NA	NA	<1.0	<1.0
	04/17/03	NA	NA	NA	NA	NA	NA	<1.0	<1.0
	07/14/03	NA	NA	NA	NA	NA	NA	<1.0	<1.0
	10/07/03	NA	NA	NA	NA	NA	NA	<1.0	<1.0
	01/02/04	NA	NA	NA	NA	NA	NA	<1.0	<1.0
	04/06/04	NA	NA	NA	NA	NA	NA	<1.0	<1.0
	07/07/04	NA	NA	NA	NA	NA	NA	<1.0	<1.0
	11/23/04	NA	NA	NA	NA	NA	NA	<1.0	<1.0
	02/11/05	NA	NA	NA	NA	NA	NA	<1.0	<1.0
	08/19/05	NA	NA	NA	NA	NA	NA	<1.0	<1.0 to <25
	11/18/05	NA	NA	NA	NA	NA	NA	<1.0	<1.0 to <12

Note:

\* Analysis for MTBE by EPA Method 8020; Analysis for 5 oxy's (including MTBE) by EPA Method 8260B; <25 µg/L For TBA.

**Table 3: Groundwater Analytical Results - Monitoring Wells**  
**246 Ghilotti Avenue, Santa Rosa**

ID	Date Sampled	TPH-g	TPH-d	B	T	E	X	MTBE*	DIPE	ETBE	TAME	TBA
		µg/L										
MW-1	06/24/96	<50	<50	<0.3	<0.3	<0.5	<0.5	NA	NA	NA	NA	NA
	12/20/96	<50	<50	<0.3	<0.3	<0.5	<0.5	140	NA	NA	NA	NA
	04/18/97	<50	NA	<0.3	<0.3	<0.5	<0.5	130	NA	NA	NA	NA
	09/11/97	<50	NA	<0.3	<0.3	<0.5	<0.5	110	NA	NA	NA	NA
	06/19/98	<50	NA	<0.3	<0.3	<0.5	<0.5	96	<1.0	<1.0	<1.0	<25
	03/03/99	<50	<50	<0.3	<0.3	<0.5	<0.5	800	NA	NA	NA	NA
	03/24/99	<50	<50	<0.3	<0.3	<0.5	<0.5	360	NA	NA	NA	NA
	03/26/99	<50	<50	<0.3	<0.3	<0.5	<0.5	250	NA	NA	NA	NA
	06/02/99	<50	<50	<0.3	<0.3	<0.5	<0.5	230	NA	NA	NA	NA
	12/28/99	<50	NA	<0.3	0.66	<0.5	<0.5	230	<1.0	<1.0	<1.0	<25
	03/23/00	<50	<50	<0.3	<0.3	<0.5	<0.5	250	<1.0	<1.0	<1.0	<25
	06/20/00	<50	<50	<0.3	<0.3	<0.5	<0.5	150	<1.0	<1.0	<1.0	<25
	10/03/00	NA	NA	NA	NA	NA	NA	130	<1.0	<1.0	<1.0	<25
	01/09/01	NA	NA	NA	NA	NA	NA	210	<1.0	<1.0	<1.0	<25
	04/10/01	NA	NA	NA	NA	NA	NA	150	NA	NA	NA	NA
	07/10/01	NA	NA	NA	NA	NA	NA	310	NA	NA	NA	NA
	10/10/01	NA	NA	NA	NA	NA	NA	140	NA	NA	NA	NA
	01/09/02	NA	NA	NA	NA	NA	NA	180	NA	NA	NA	NA
	04/05/02	NA	NA	NA	NA	NA	NA	140	<1.0	<1.0	<1.0	<25
	07/03/02	NA	NA	NA	NA	NA	NA	94	<1.0	<1.0	<1.0	<25
	10/24/02	NA	NA	NA	NA	NA	NA	75	<1.0	<1.0	<1.0	<25
	01/24/03	NA	NA	NA	NA	NA	NA	71	<1.0	<1.0	<1.0	<25
	04/17/03	NA	NA	NA	NA	NA	NA	61	<1.0	<1.0	<1.0	<25
	07/14/03	NA	NA	NA	NA	NA	NA	63	<1.0	<1.0	<1.0	<25
	10/07/03	NA	NA	NA	NA	NA	NA	31	<1.0	<1.0	<1.0	<25
	01/02/04	NA	NA	NA	NA	NA	NA	20	<1.0	<1.0	<1.0	<25
	04/06/04	NA	NA	NA	NA	NA	NA	33	<1.0	<1.0	<1.0	<25
	07/07/04	NA	NA	NA	NA	NA	NA	27	<1.0	<1.0	<1.0	<25
	11/23/04	NA	NA	NA	NA	NA	NA	22	NA	NA	NA	NA
	02/11/05	NA	NA	NA	NA	NA	NA	44	<1.0	<1.0	<1.0	<25
	06/13/05	Well inaccessible										
	08/19/05	NA	NA	NA	NA	NA	NA	16	<1.0	<1.0	<1.0	<25
	11/18/05	NA	NA	NA	NA	NA	NA	7.2	<1.0	<1.0	<1.0	<12

**Table 3: Groundwater Analytical Results - Monitoring Wells**  
**246 Ghilotti Avenue, Santa Rosa**

ID	Date Sampled	TPH-g	TPH-d	B	T	E	X	MTBE*	DIPE	ETBE	TAME	TBA
		µg/L										
MW-2	06/24/96	<50	<50	<0.3	<0.3	<0.5	<0.5	NA	NA	NA	NA	NA
	12/20/96	<50	<50	<0.3	<0.3	<0.5	<0.5	37	NA	NA	NA	NA
	04/18/97	<50	NA	<0.3	<0.3	<0.5	<0.5	54	NA	NA	NA	NA
	09/11/97	<50	NA	<0.3	<0.3	<0.5	<0.5	72	NA	NA	NA	NA
	06/19/98	<50	NA	<0.3	<0.3	<0.5	<0.5	15	<1.0	<1.0	<1.0	<25
	03/03/99	<50	<50	<0.3	<0.3	<0.5	<0.5	42	NA	NA	NA	NA
	06/02/99	<50	<50	<0.3	<0.3	<0.5	<0.5	43	NA	NA	NA	NA
	12/28/99	<50	NA	<0.3	<0.3	<0.5	<0.5	45	<1.0	<1.0	<1.0	<25
	03/23/00	<50	<50	<0.3	<0.3	<0.5	<0.5	72	<1.0	<1.0	<1.0	<25
	06/20/00	<50	<50	<0.3	<0.3	<0.5	<0.5	76	<1.0	<1.0	<1.0	<25
	10/03/00	NA	NA	NA	NA	NA	NA	52	<1.0	<1.0	<1.0	<25
	01/09/01	NA	NA	NA	NA	NA	NA	93	<1.0	<1.0	<1.0	<25
	04/10/01	NA	NA	NA	NA	NA	NA	120	NA	NA	NA	NA
	07/10/01	NA	NA	NA	NA	NA	NA	140	NA	NA	NA	NA
	10/10/01	NA	NA	NA	NA	NA	NA	130	NA	NA	NA	NA
	01/09/02	NA	NA	NA	NA	NA	NA	86	NA	NA	NA	NA
	04/05/02	NA	NA	NA	NA	NA	NA	80	<1.0	<1.0	<1.0	<25
	07/03/02	NA	NA	NA	NA	NA	NA	120	<1.0	<1.0	<1.0	<25
	10/24/02	NA	NA	NA	NA	NA	NA	100	<1.0	<1.0	<1.0	<25
	01/24/03	NA	NA	NA	NA	NA	NA	80	<1.0	<1.0	<1.0	<25
	04/17/03	NA	NA	NA	NA	NA	NA	82	<1.0	<1.0	<1.0	<25
	07/14/03	NA	NA	NA	NA	NA	NA	140	<1.0	<1.0	<1.0	<25
	10/07/03	NA	NA	NA	NA	NA	NA	51	<1.0	<1.0	<1.0	<25
	01/02/04	NA	NA	NA	NA	NA	NA	54	<1.0	<1.0	<1.0	<25
	04/06/04	NA	NA	NA	NA	NA	NA	30	<1.0	<1.0	<1.0	<25
	07/07/04	NA	NA	NA	NA	NA	NA	27	<1.0	<1.0	<1.0	<25
	11/23/04	NA	NA	NA	NA	NA	NA	26	<1.0	<1.0	<1.0	<25
	02/11/05	NA	NA	NA	NA	NA	NA	28	<1.0	<1.0	<1.0	<25
	06/13/05	Well inaccessible										
	08/19/05	NA	NA	NA	NA	NA	NA	8.6	<1.0	<1.0	<1.0	<25
	11/18/05	NA	NA	NA	NA	NA	NA	7.7	<1.0	<1.0	<1.0	<12

**Table 3: Groundwater Analytical Results - Monitoring Wells**  
**246 Ghilotti Avenue, Santa Rosa**

ID	Date Sampled	TPH-g	TPH-d	B	T	E	X	MTBE*	DIPE	ETBE	TAME	TBA
		µg/L										
MW-3	06/24/96	<50	<50	<0.3	<0.3	<0.5	<0.5	NA	NA	NA	NA	NA
	12/20/96	<50	<50	<0.3	<0.3	<0.5	<0.5	32	NA	NA	NA	NA
	04/18/97	<50	NA	<0.3	<0.3	<0.5	<0.5	31	NA	NA	NA	NA
	09/11/97	<50	NA	<0.3	<0.3	<0.5	<0.5	39	NA	NA	NA	NA
	06/19/98	<50	NA	<0.3	<0.3	<0.5	<0.5	53	<1.0	<1.0	<1.0	<25
	03/03/99	<50	<50	<0.3	<0.3	<0.5	<0.5	20	NA	NA	NA	NA
	06/02/99	<50	<50	<0.3	<0.3	<0.5	<0.5	16	NA	NA	NA	NA
	12/28/99	<50	NA	<0.3	0.45	<0.5	<0.5	35	<1.0	<1.0	<1.0	<25
	03/23/00	<50	<50	<0.3	<0.3	<0.5	<0.5	14	<1.0	<1.0	<1.0	<25
	06/20/00	<50	<50	<0.3	<0.3	<0.5	<0.5	12	<1.0	<1.0	<1.0	<25
	10/03/00	NA	NA	NA	NA	NA	NA	9.8	<1.0	<1.0	<1.0	<25
	01/09/01	NA	NA	NA	NA	NA	NA	63	<1.0	<1.0	<1.0	<25
	04/10/01	NA	NA	NA	NA	NA	NA	47	NA	NA	NA	NA
	07/10/01	NA	NA	NA	NA	NA	NA	76	NA	NA	NA	NA
	10/10/01	NA	NA	NA	NA	NA	NA	67	NA	NA	NA	NA
	01/09/02	NA	NA	NA	NA	NA	NA	38	NA	NA	NA	NA
	04/05/02	NA	NA	NA	NA	NA	NA	44	<1.0	<1.0	<1.0	<25
	07/03/02	NA	NA	NA	NA	NA	NA	55	<1.0	<1.0	<1.0	<25
	10/24/02	NA	NA	NA	NA	NA	NA	79	<1.0	<1.0	<1.0	<25
	01/24/03	NA	NA	NA	NA	NA	NA	40	<1.0	<1.0	<1.0	<25
	04/17/03	NA	NA	NA	NA	NA	NA	65	<1.0	<1.0	<1.0	<25
	07/14/03	NA	NA	NA	NA	NA	NA	98	<1.0	<1.0	<1.0	<25
	10/07/03	NA	NA	NA	NA	NA	NA	76	<1.0	<1.0	<1.0	<25
	01/02/04	NA	NA	NA	NA	NA	NA	46	<1.0	<1.0	<1.0	<25
	04/06/04	NA	NA	NA	NA	NA	NA	49	<1.0	<1.0	<1.0	<25
	07/07/04	NA	NA	NA	NA	NA	NA	74	<1.0	<1.0	<1.0	<25
	11/23/04	NA	NA	NA	NA	NA	NA	90	<1.0	<1.0	<1.0	<25
	02/11/05	NA	NA	NA	NA	NA	NA	54	<1.0	<1.0	<1.0	<25
	06/13/05	NA	NA	NA	NA	NA	NA	23	<1.0	<1.0	<1.0	<25
	08/19/05	NA	NA	NA	NA	NA	NA	24	<1.0	<1.0	<1.0	<25
	11/18/05	NA	NA	NA	NA	NA	NA	35	<1.0	<1.0	<1.0	<12

**Table 3: Groundwater Analytical Results - Monitoring Wells**  
**246 Ghilotti Avenue, Santa Rosa**

ID	Date Sampled	TPH-g	TPH-d	B	T	E	X	MTBE*	DIPE	ETBE	TAME	TBA
		µg/L										
MW-04	02/11/05	<50	NA	<1.0	<1.0	<1.0	<b>1.1</b>	<b>1.9</b>	<1.0	<1.0	<1.0	<25
	06/13/05						Well inaccessible					
	08/19/05	NA	NA	NA	NA	NA	<b>1.0</b>	<1.0	<1.0	<1.0	<1.0	<25
	11/18/05	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<12
MW-05	02/11/05	<50	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25
	06/13/05	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<25
	08/19/05	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<25
	11/18/05	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<12
MW-06	02/11/05	<50	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25
	06/13/05	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<25
	08/19/05	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<25
	11/18/05	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<12
MW-07	02/11/05	<50	NA	<1.0	<1.0	<1.0	<1.0	<b>6.9</b>	<1.0	<1.0	<1.0	<25
	06/13/05	NA	NA	NA	NA	NA	<b>1.9</b>	<1.0	<1.0	<1.0	<1.0	<25
	08/19/05	NA	NA	NA	NA	NA	<b>1.4</b>	<1.0	<1.0	<1.0	<1.0	<25
	11/18/05	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<12
MW-08	02/11/05	<50	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25
	06/13/05	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<25
	08/19/05	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<25
	11/18/05	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<12
MW-09	02/11/05	<50	NA	<1.0	<1.0	<1.0	<1.0	<b>3.2</b>	<1.0	<1.0	<1.0	<25
	06/13/05	NA	NA	NA	NA	NA	<b>1.3</b>	<1.0	<1.0	<1.0	<1.0	<25
	08/19/05	NA	NA	NA	NA	NA	<b>8.7</b>	<1.0	<1.0	<1.0	<1.0	<25
	11/18/05	NA	NA	NA	NA	NA	<b>9.6</b>	<1.0	<1.0	<1.0	<1.0	<12
MW-10	02/11/05	<50	NA	<1.0	<1.0	<1.0	<1.0	<b>20</b>	<1.0	<1.0	<1.0	<25
	06/13/05	NA	NA	NA	NA	NA	<b>11</b>	<1.0	<1.0	<1.0	<1.0	<25
	08/19/05	NA	NA	NA	NA	NA	<b>15</b>	<1.0	<1.0	<1.0	<1.0	<25
	11/18/05	NA	NA	NA	NA	NA	<b>19</b>	<1.0	<1.0	<1.0	<1.0	<12

Note:

\*Analysis for MTBE by EPA Method 8020; Analysis for 5 oxy's (including MTBE) by EPA Method 8260B.

## **APPENDIX A**

### **Well Purge Records, 4<sup>th</sup> Quarter 2005**

**SCS ENGINEERS**

## **WELL PURGE RECORD**

2005 - 4th Quarter

**WELL NUMBER**

MW- 1

# **SCS ENGINEERS**

## **WELL PURGE RECORD**

2005 - 4th Quarter

**WELL NUMBER**

MW- 2

# **SCS ENGINEERS**

## **WELL PURGE RECORD**

2005 - 4th Quarter

WELL NUMBER  
**MW-**

SCS ENGINEERS

## **WELL PURGE RECORD**

2005 - 4th Quarter

WELL NUMBER

MW-04

# SCS ENGINEERS

## **WELL PURGE RECORD**

2005 - 4th Quarter

WELL NUMBER

MW-05

# **SCS ENGINEERS**

## **WELL PURGE RECORD**

2005 - 4th Quarter

**WELL NUMBER**

MW-06

# **SCS ENGINEERS**

## **WELL PURGE RECORD**

2005 - 4th Quarter

**WELL NUMBER**

MW-07

# **SCS ENGINEERS**

## **WELL PURGE RECORD**

2005 - 4th Quarter

**WELL NUMBER**

MW-08

# **SCS ENGINEERS**

## **WELL PURGE RECORD**

2005 - 4th Quarter

**WELL NUMBER**

MW-09

# **SCS ENGINEERS**

## **WELL PURGE RECORD**

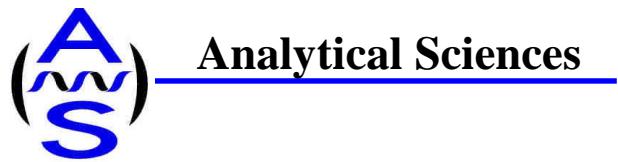
2005 - 4th Quarter

**WELL NUMBER**

MW-10

## **APPENDIX B**

**Analytical Sciences Report #5112203, dated December 5, 2005  
Certificate of Disposal, dated October 11, 2005**



## Analytical Sciences

December 05, 2005

Shannon Zimmerman  
SCS Engineers  
3645 Westwind Blvd  
Santa Rosa, CA 95403

Dear Shannon,

Enclosed you will find Analytical Sciences' final report 5112203 for your Ghilotti Construction project. An invoice for this work is enclosed.

Should you or your client have any questions regarding this report please contact me at your convenience. We appreciate you selecting Analytical Sciences for this work and look forward to serving your analytical chemistry needs on projects in the future.

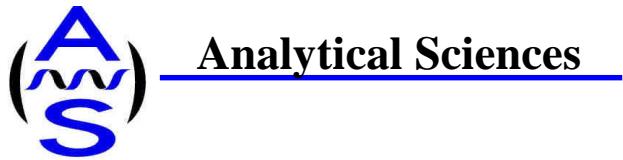
Sincerely,

Analytical Sciences

A handwritten signature in blue ink that reads "Mark A. Valentini". It is written in a cursive style with a long, sweeping 'M' and 'A'.

Mark A. Valentini, Ph.D.

Laboratory Director



Analytical Sciences

Report Date: December 05, 2005

## Laboratory Report

Shannon Zimmerman  
SCS Engineers  
3645 Westwind Blvd  
Santa Rosa, CA 95403

Project Name: **Ghilotti Construction** **01203312.00**  
Lab Project: **5112203**

This 9 page report of analytical data has been reviewed and approved for release.

A handwritten signature in blue ink that reads "Mark A. Valentini".

Mark A. Valentini, Ph.D.  
Laboratory Director



## Oxygenated Gasoline Additives in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5112203-01	<b>MW-1</b>	Tertiary Butyl Alcohol (TBA)	ND	12
		Methyl tert-Butyl Ether (MTBE)	7.2	1.0
		Di-isopropyl Ether (DIPE)	ND	1.0
		Ethyl tert-Butyl Ether (ETBE)	ND	1.0
		Tert-Amyl Methyl Ether (TAME)	ND	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
Dibromofluoromethane		21.0	105	70-130
Toluene-d8		21.2	106	70-130
4-Bromofluorobenzene		18.1	90	70-130

Date Sampled: 11/18/05 Date Analyzed: 11/23/05 QC Batch: B000354

Date Received: 11/22/05 Method: EPA 8260B

## Oxygenated Gasoline Additives in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5112203-02	<b>MW-2</b>	Tertiary Butyl Alcohol (TBA)	ND	12
		Methyl tert-Butyl Ether (MTBE)	7.7	1.0
		Di-isopropyl Ether (DIPE)	ND	1.0
		Ethyl tert-Butyl Ether (ETBE)	ND	1.0
		Tert-Amyl Methyl Ether (TAME)	ND	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
Dibromofluoromethane		21.0	105	70-130
Toluene-d8		21.3	106	70-130
4-Bromofluorobenzene		18.3	92	70-130

Date Sampled: 11/18/05 Date Analyzed: 11/23/05 QC Batch: B000354

Date Received: 11/22/05 Method: EPA 8260B



## Oxygenated Gasoline Additives in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5112203-03	<b>MW-3</b>	Tertiary Butyl Alcohol (TBA)	ND	12
		Methyl tert-Butyl Ether (MTBE)	35	1.0
		Di-isopropyl Ether (DIPE)	ND	1.0
		Ethyl tert-Butyl Ether (ETBE)	ND	1.0
		Tert-Amyl Methyl Ether (TAME)	ND	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
Dibromofluoromethane		21.1	106	70-130
Toluene-d8		21.3	106	70-130
4-Bromofluorobenzene		18.2	91	70-130

Date Sampled:	11/18/05	Date Analyzed:	11/24/05	QC Batch: B000354
Date Received:	11/22/05	Method:	EPA 8260B	

## Oxygenated Gasoline Additives in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5112203-04	<b>MW-04</b>	Tertiary Butyl Alcohol (TBA)	ND	12
		Methyl tert-Butyl Ether (MTBE)	ND	1.0
		Di-isopropyl Ether (DIPE)	ND	1.0
		Ethyl tert-Butyl Ether (ETBE)	ND	1.0
		Tert-Amyl Methyl Ether (TAME)	ND	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
Dibromofluoromethane		21.1	106	70-130
Toluene-d8		21.2	106	70-130
4-Bromofluorobenzene		18.4	92	70-130

Date Sampled:	11/18/05	Date Analyzed:	11/24/05	QC Batch: B000354
Date Received:	11/22/05	Method:	EPA 8260B	



## Oxygenated Gasoline Additives in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5112203-05	<b>MW-05</b>	Tertiary Butyl Alcohol (TBA)	ND	12
		Methyl tert-Butyl Ether (MTBE)	ND	1.0
		Di-isopropyl Ether (DIPE)	ND	1.0
		Ethyl tert-Butyl Ether (ETBE)	ND	1.0
		Tert-Amyl Methyl Ether (TAME)	ND	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
Dibromofluoromethane		21.1	106	70-130
Toluene-d8		21.2	106	70-130
4-Bromofluorobenzene		18.2	91	70-130

Date Sampled:	11/18/05	Date Analyzed:	11/24/05	QC Batch: B000354
Date Received:	11/22/05	Method:	EPA 8260B	

## Oxygenated Gasoline Additives in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5112203-06	<b>MW-06</b>	Tertiary Butyl Alcohol (TBA)	ND	12
		Methyl tert-Butyl Ether (MTBE)	ND	1.0
		Di-isopropyl Ether (DIPE)	ND	1.0
		Ethyl tert-Butyl Ether (ETBE)	ND	1.0
		Tert-Amyl Methyl Ether (TAME)	ND	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
Dibromofluoromethane		21.0	105	70-130
Toluene-d8		21.3	106	70-130
4-Bromofluorobenzene		18.2	91	70-130

Date Sampled:	11/18/05	Date Analyzed:	11/24/05	QC Batch: B000354
Date Received:	11/22/05	Method:	EPA 8260B	



## Oxygenated Gasoline Additives in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5112203-07	<b>MW-07</b>	Tertiary Butyl Alcohol (TBA)	ND	12
		Methyl tert-Butyl Ether (MTBE)	ND	1.0
		Di-isopropyl Ether (DIPE)	ND	1.0
		Ethyl tert-Butyl Ether (ETBE)	ND	1.0
		Tert-Amyl Methyl Ether (TAME)	ND	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
Dibromofluoromethane		20.9	104	70-130
Toluene-d8		21.3	106	70-130
4-Bromofluorobenzene		18.1	90	70-130

Date Sampled:	11/18/05	Date Analyzed:	11/24/05	QC Batch: B000354
Date Received:	11/22/05	Method:	EPA 8260B	

## Oxygenated Gasoline Additives in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5112203-08	<b>MW-08</b>	Tertiary Butyl Alcohol (TBA)	ND	12
		Methyl tert-Butyl Ether (MTBE)	19	1.0
		Di-isopropyl Ether (DIPE)	ND	1.0
		Ethyl tert-Butyl Ether (ETBE)	ND	1.0
		Tert-Amyl Methyl Ether (TAME)	ND	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
Dibromofluoromethane		21.1	106	70-130
Toluene-d8		21.2	106	70-130
4-Bromofluorobenzene		18.4	92	70-130

Date Sampled:	11/18/05	Date Analyzed:	11/24/05	QC Batch: B000354
Date Received:	11/22/05	Method:	EPA 8260B	



## Oxygenated Gasoline Additives in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5112203-09	<b>MW-09</b>	Tertiary Butyl Alcohol (TBA)	ND	12
		Methyl tert-Butyl Ether (MTBE)	9.6	1.0
		Di-isopropyl Ether (DIPE)	ND	1.0
		Ethyl tert-Butyl Ether (ETBE)	ND	1.0
		Tert-Amyl Methyl Ether (TAME)	ND	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
Dibromofluoromethane		20.7	104	70-130
Toluene-d8		21.3	106	70-130
4-Bromofluorobenzene		18.3	92	70-130

Date Sampled:	11/18/05	Date Analyzed:	11/24/05	QC Batch: B000354
Date Received:	11/22/05	Method:	EPA 8260B	

## Oxygenated Gasoline Additives in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5112203-10	<b>MW-10</b>	Tertiary Butyl Alcohol (TBA)	ND	12
		Methyl tert-Butyl Ether (MTBE)	ND	1.0
		Di-isopropyl Ether (DIPE)	ND	1.0
		Ethyl tert-Butyl Ether (ETBE)	ND	1.0
		Tert-Amyl Methyl Ether (TAME)	ND	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
Dibromofluoromethane		21.1	106	70-130
Toluene-d8		21.4	107	70-130
4-Bromofluorobenzene		18.2	91	70-130

Date Sampled:	11/18/05	Date Analyzed:	11/24/05	QC Batch: B000354
Date Received:	11/22/05	Method:	EPA 8260B	



## Oxygenated Gasoline Additives in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5112203-11	DW-246	Tertiary Butyl Alcohol (TBA)	ND	12
		Methyl tert-Butyl Ether (MTBE)	ND	1.0
		Di-isopropyl Ether (DIPE)	ND	1.0
		Ethyl tert-Butyl Ether (ETBE)	ND	1.0
		Tert-Amyl Methyl Ether (TAME)	ND	1.0
Surrogates	Result (ug/L)	% Recovery	Acceptance Range (%)	
Dibromofluoromethane	21.2	106	70-130	
Toluene-d8	21.2	106	70-130	
4-Bromofluorobenzene	18.2	91	70-130	

Date Sampled: 11/18/05 Date Analyzed: 11/24/05 QC Batch: B000354  
Date Received: 11/22/05 Method: EPA 8260B



## Quality Assurance Report

### Oxygenated Gasoline Additives in Water

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch B000354 - EPA 5030 GC/MS

Blank (B000354-BLK1)							Prepared & Analyzed: 11/23/05			
Tertiary Butyl Alcohol (TBA)	ND	12	ug/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	ug/L							
Di-isopropyl Ether (DIPE)	ND	1.0	ug/L							
Ethyl tert-Butyl Ether (ETBE)	ND	1.0	ug/L							
Tert-Amyl Methyl Ether (TAME)	ND	1.0	ug/L							

Surrogate: Dibromofluoromethane 20.9 ug/L 20.0 104 70-130

Surrogate: Toluene-d8 20.8 ug/L 20.0 104 70-130

Surrogate: 4-Bromofluorobenzene 18.7 ug/L 20.0 94 70-130

Matrix Spike (B000354-MS1)							Source: 5112306-01 Prepared & Analyzed: 11/23/05			
1,1-Dichloroethene (1,1-DCE)	19.8	1.0	ug/L	25.0	ND	79	70-130			
Benzene	22.6	1.0	ug/L	25.0	ND	90	70-130			
Trichloroethene (TCE)	22.3	1.0	ug/L	25.0	ND	89	70-130			
Toluene	23.0	1.0	ug/L	25.0	ND	92	70-130			
Chlorobenzene	22.1	1.0	ug/L	25.0	ND	88	70-130			

Surrogate: Dibromofluoromethane 20.8 ug/L 20.0 104 70-130

Surrogate: Toluene-d8 21.1 ug/L 20.0 106 70-130

Surrogate: 4-Bromofluorobenzene 19.1 ug/L 20.0 96 70-130

Matrix Spike Dup (B000354-MSD1)							Source: 5112306-01 Prepared & Analyzed: 11/23/05			
1,1-Dichloroethene (1,1-DCE)	19.8	1.0	ug/L	25.0	ND	79	70-130	0	20	
Benzene	22.5	1.0	ug/L	25.0	ND	90	70-130	0	20	
Trichloroethene (TCE)	22.2	1.0	ug/L	25.0	ND	89	70-130	0	20	
Toluene	22.9	1.0	ug/L	25.0	ND	92	70-130	0	20	
Chlorobenzene	21.9	1.0	ug/L	25.0	ND	88	70-130	0	20	

Surrogate: Dibromofluoromethane 20.8 ug/L 20.0 104 70-130

Surrogate: Toluene-d8 21.1 ug/L 20.0 106 70-130

Surrogate: 4-Bromofluorobenzene 19.0 ug/L 20.0 95 70-130



## Notes and Definitions

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ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

RPD Relative Percent Difference

**Analytical Sciences**  
 P.O. Box 750336, Petaluma, CA 94975-0336  
 110 Liberty Street, Petaluma, CA 94952  
 (707) 769-3128

# CHAIN OF CUSTODY



CLIENT INFORMATION		BILLING INFORMATION	
COMPANY NAME: SCS ENGINEERS	CONTACT: Stacey	SCS ENGINEERS PROJECT NUMBER: Ghilotti Construction	
ADDRESS: 3645 WESTWIND BOULEVARD	COMPANY NAME: Ghilotti Construction	SCS ENGINEERS PROJECT NUMBER: 01203312.00	
SANTA ROSA, CA 95403	ADDRESS: 246 Ghilotti Ave	GEOTRACKER EDF: X Y N	
CONTACT: Kevin Coker	SANTA ROSA, CA 95407	GLOBAL ID: T0609700354	
PHONE#: (707) 546-9461	PHONE#: 707-585-1221	COOLER TEMPERATURE: °C	
FAX #: (707) 544-5769	FAX #:	COC	

LAB PROJECT NUMBER:

CLIENT INFORMATION		BILLING INFORMATION	
COMPANY NAME: SCS ENGINEERS	CONTACT: Stacey	SCS ENGINEERS PROJECT NUMBER: Ghilotti Construction	
ADDRESS: 3645 WESTWIND BOULEVARD	COMPANY NAME: Ghilotti Construction	SCS ENGINEERS PROJECT NUMBER: 01203312.00	
SANTA ROSA, CA 95403	ADDRESS: 246 Ghilotti Ave	GEOTRACKER EDF: X Y N	
CONTACT: Kevin Coker	SANTA ROSA, CA 95407	GLOBAL ID: T0609700354	
PHONE#: (707) 546-9461	PHONE#: 707-585-1221	COOLER TEMPERATURE: °C	
FAX #: (707) 544-5769	FAX #:	COC	

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COMPANY NAME: SCS ENGINEERS	CONTACT: Stacey	SCS ENGINEERS PROJECT NUMBER: Ghilotti Construction	
ADDRESS: 3645 WESTWIND BOULEVARD	COMPANY NAME: Ghilotti Construction	SCS ENGINEERS PROJECT NUMBER: 01203312.00	
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CONTACT: Kevin Coker	SANTA ROSA, CA 95407	GLOBAL ID: T0609700354	
PHONE#: (707) 546-9461	PHONE#: 707-585-1221	COOLER TEMPERATURE: °C	
FAX #: (707) 544-5769	FAX #:	COC	

PAGE 1 OF 1

## ANALYSIS

ITEM	CLIENT SAMPLE I.D.	DATE SAMPLED	TIME	MATRIX	# CONT.	PRESV. YES/NO	LAB SAMPLE #		PAGE 1 OF 1
							COMMENTS		
1	MW-1	11/14/05	11:16	LIQ	3	YES			
2	MW-2		12:00	LIQ			X		
3	MW-3		12:30	LIQ					
4	MW-04		1:00	LIQ					
5	MW-05		1:05	LIQ					
6	MW-06		1:35	LIQ					
7	MW-07		11:55	LIQ					
8	MW-08		11:55	LIQ					
9	MW-09		11:55	LIQ					
10	MW-10		12:00	LIQ					
11	DW-246		1:40	LIQ					

## SIGNATURES

RELINQUISHED BY:	DATE:: 11/21/05	TIME: 9:30	RECEIVED BY LABORATORY:
			K. Ricci
RECEIVED BY:	DATE::	TIME::	
RELINQUISHED BY:	DATE::	TIME::	
RECEIVED BY:	DATE::	TIME::	SIGNATURE
			9/23
			11/20/05
			TIME

# IWM, Inc.

INTEGRATED WASTESTREAM MANAGEMENT, INC.  
950 AMES AVENUE, MILPITAS, CA 95035  
PHONE: 408.942.8955 FAX: 408.942.1499

## CERTIFICATE OF DISPOSAL

Generator Name: Ghilotti Construction  
 Address: 246 Ghilotti Avenue  
Santa Rosa, CA 95407  
 Contact: Damien Calegari  
 Phone: 707-585-1221

Facility Name: Ghilotti Construction  
 Address: 246 Ghilotti Avenue  
Santa Rosa, CA  
 Facility Contact: Amy Yardley, SCS Engineers  
 Phone: 707-546-9461

IWM Job #:	<u>95468-DS</u>
Description of Waste:	<u>1 Drum(s) of</u>
	<u>Non-Hazardous</u>
	<u>Soil</u>
Removal Date:	<u>10/11/05</u>
Ticket #:	<u>RSVRL111005</u>

### Transporter Information

Name: IWM, Inc.  
 Address: 950 Ames Avenue  
Milpitas, CA 95035  
 Phone: (408) 942-8955

### Disposal Facility Information

Name: Republic Services Vasco Road Landfill  
 Address: 4001 N. Vasco Road  
Livermore, CA 94550  
 Phone: (925) 447-0491

**IWM, INC. CERTIFIES THAT THE ABOVE LISTED NON-HAZARDOUS WASTE WILL BE TREATED AND DISPOSED AT THE DESIGNATED FACILITY IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.**

William T. DeLon *William T. DeLon*  
 Authorized Representative (Print Name and Signature)

10/11/05  
 Date

# IWM, Inc.

INTEGRATED WASTESTREAM MANAGEMENT, INC.  
950 AMES AVENUE, MILPITAS, CA 95035  
PHONE: 408.942.8955 FAX: 408.942.1499

## CERTIFICATE OF DISPOSAL

Generator Name: Ghilotti Construction  
 Address: 246 Ghilotti Avenue  
Santa Rosa, CA 95407  
 Contact: Damien Calegari  
 Phone: 707-585-1221

Facility Name: Ghilotti Construction  
 Address: 246 Ghilotti Avenue  
Santa Rosa, CA  
 Facility Contact: Amy Yardley, SCS Engineers  
 Phone: 707-546-9461

IWM Job #:	<u>95469-DW</u>
Description of Waste:	<u>2 Drum(s) of</u>
	<u>Non-Hazardous</u>
	<u>Water</u>
Removal Date:	<u>10/11/05</u>
Ticket #:	<u>SP111005-MISC</u>

### Transporter Information

Name: IWM, Inc.  
 Address: 950 Ames Avenue  
Milpitas, CA 95035  
 Phone: (408) 942-8955

### Disposal Facility Information

Name: Seaport Refining & Environmental  
 Address: 675 Seaport Blvd  
Redwood City, CA 94063  
 Phone: 650-364-6158

**IWM, INC. CERTIFIES THAT THE ABOVE LISTED NON-HAZARDOUS WASTE WILL BE TREATED AND DISPOSED AT THE DESIGNATED FACILITY IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.**

William T. DeLon *William T. DeLon*  
 Authorized Representative (Print Name and Signature)

10/11/05  
 Date